

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the claims

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

Claim 1 is amended to recite that the pull member is connected to the intermediate member substantially at all times. It is respectfully submitted that no new matter is added, since support for the amendments is found in Figs. 1(a) through 3(b) of the pending application and at least in paragraphs [0055], [0056], [0061], [0062], [0068] and [0077] of the accompanying description in the specification.

Claims 6-9 are left unchanged.

Claims 2-5 and 10-13 remain withdrawn

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

2. Rejection of claims 1 and 6-9 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 4,059,036 (*Hartley*) in view of U.S. patent no. 6,527,266 (*Yonezawa et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to amended claim 1, from which claims 6-9 depend.

In particular, the proposed combination of the *Hartley* and *Yonezawa* patents fails to disclose a pull member connected to an intermediate member substantially at all times, as required by amended claim 1.

Additionally, the proposed combination of the *Hartley* and *Yonezawa* patents also fails to disclose a fluid flow hole opened in a straight outer surface of an

intermediate member and closed by close engagement with an inner surface of the hole in the moveable member, as required by claim 1.

Further, the Office action has failed to establish an appropriate factual underpinning for the asserted finding that it would have been "obvious to try" to communicate with the outer surface of an intermediate member via a hole through the intermediate member.

By way of review, amended claim 1 defines an embodiment of a clamping device that includes a central pillar projected from a reference member for insertion into a hole of a moveable member. The central pillar is provided with a tapered inclined outer surface that corresponds to an inclined inner surface of an intermediate member having a straight outer surface to fit an inner periphery of the hole. At least a part of the circumference of the intermediate member is allowed to deform in both an expanding and contracting direction. A pull member is axially movably inserted into the central pillar and is further connected to the intermediate member substantially at all times. A lock and release arrangement are provided to move the intermediate member via the pull member toward a base end for locking or toward a leading end for releasing. A fluid flow hole is opened in the straight outer surface of the intermediate member and is closed by the inner peripheral surface of the hole when the straight outer surface of the intermediate member comes into close contact with the inner peripheral surface of the hole when the intermediate member is moved for locking.

In view of the amendment to claim 1, the pull member is connected to the intermediate member substantially at all times, so that the pull member can effectuate the locking and releasing of the intermediate member by pulling the intermediate member towards the base end or the leading end respectively.

In contrast to the structural configuration recited in amended claim 1, the *Hartley* patent fails to disclose a pull member that is connected to an intermediate member substantially at all times. On page 2, the Office action associates the split ring 2 with the intermediate member of claim 1, the rod 7 with the pull member of

claim 1, and the plug 5 with the central pillar of claim 1. The split ring 2 is caused to expand via engagement with the plug 5 and via compression caused by retracting the rod 7, which is connected to a second plug 4, which contacts a second split ring 1, which contacts the split ring 2.

While the split ring 2 may occasionally be in contact with elements that are connected to the rod 7, the split ring 2 itself is not connected to the rod 7, and is further not connected to the rod 7 substantially at all times. In particular, the split ring 2 can axially move independently of the axial movement of the rod 7, and is thus not connected to the rod 7.

The Office action turns to the *Yonezawa* patent for combination with the *Hartley* patent. However, as is shown in Figs. 2-5 of the *Yonezawa* patent, the shuttle member 23 is also not connected to the pull member 31, since the shuttle member 23 is separated from the pull rod 31 by the plug portion 21, and the shuttle member 23 is further axially independently movable with respect to the pull member 31.

Thus, neither the *Hartley* patent nor the *Yonezawa* patent discloses a pull member that is connected to an intermediate member substantially at all times, as is required by amended claim 1. Since this structure is not disclosed in either the *Hartley* patent or the *Yonezawa* patent, it follows that the proposed combination of the *Hartley* and *Yonezawa* patents will also fail to disclose this structure.

Therefore, since the proposed combination of the *Hartley* and *Yonezawa* patents fails to disclose a pull member that is connected to an intermediate member substantially at all times, as is required by amended claim 1, a *prima facie* case of obviousness cannot be maintained, and withdrawal of this rejection is respectfully requested.

Similarly, neither the *Hartley* patent nor the *Yonezawa* patent disclose a fluid flow hole opened in the straight outer surface of an intermediate member and closed by close engagement with an inner surface of the hole in the moveable member, as is required by amended claim 1.

The *Hartley* patent discloses a split ring 2 that has a gap 3 in its periphery. However, the gap is not disclosed as being a fluid flow hole. Further, since the gap extends along the entire length of the split ring 2 (Fig. 2), at least one end of the gap remains open when the split ring is in close engagement with the inner surface of the tube (Fig. 1).

The Office action turns to the *Yonezawa* patent to cure this deficiency of the *Hartley* patent. A review of the *Yonezawa* patent reveals, however, that there is no fluid flow hole opened in the outer surface of the shuttle member 23. In fact, the only fluid hole described, hole 42, is clearly shown as being opened in the pull rod 31. Further, since fluid exiting the hole 42 passes over the outer surface of the shuttle member 23 (col. 6, lines 13-18), a skilled artisan would not have had any reason to provide a fluid flow hole opened in the outer surface of the shuttle member 23.

Thus, since neither the *Hartley* patent nor the *Yonezawa* patent discloses a fluid flow hole opened in the outer surface of an intermediate member and closed by close engagement with an inner surface of the hole in the moveable member, as is required by amended claim 1, and a skilled artisan would not have made such a modification, the proposed combination of the *Hartley* and the *Yonezawa* patents fails to disclose every feature of amended claim 1. Accordingly, a *prima facie* case of obviousness cannot be maintained, and withdrawal of this rejection is respectfully requested.

Further still, the Office action fails to set forth the factual underpinning necessary to show that it would have been "obvious to try" to combine the features of the *Hartley* and the *Yonezawa* patents.

MPEP § 2143 E, states the requirements as follows below for providing the appropriate factual underpinnings for a finding that a combination would have been "obvious to try."

**E. "Obvious To Try" - Choosing From a Finite Number of Identified, Predictable Solutions, With a Reasonable Expectation of Success**

To reject a claim based on this rationale, Office personnel must resolve the *Graham* factual inquiries. Then, Office personnel must articulate the following:

- (1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem;
- (2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;
- (3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success; and
- (4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that "a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely that product [was] not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103." *KSR*, 550 U.S. at \_\_\_, 82 USPQ2d at 1397. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

In view of the above necessary factual analysis, it can be seen that the Office action has failed to establish at least factors 1 and 2 above. Specifically, the Office action has failed to establish that there is a recognized problem or need in the art, and that there had been a finite number of identified, predictable potential solutions to the known need.

In view of the failure of the Office action to establish at least these two factual underpinnings, a *prima facie* case of obviousness cannot be maintained, and withdrawal of this rejection is respectfully requested.

As mentioned above, applicant submits that independent amended claim 1 is patentable and therefore, claims 6-9, which depend from claim 1, are also considered to be patentable as containing all of the elements of claim 1, as well as for their respective recited features.

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Examiner: R. C. Watson  
Art Unit: 3723

3. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicant's attorney, the examiner is invited to contact the undersigned at the numbers shown below.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Patrick M. Buechner", written in a cursive style.

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